

IN THE CLAIMS:

1. (Currently Amended) An arbor assembly for mounting a hole saw to a drill, the arbor assembly comprising:

a shank for engagement with the drill, said shank including an O-ring recess;

an adaptor for supporting the hole saw, said adaptor being mounted to said shank;

an O-ring positioned within said O-ring recess, said O-ring reducing vibrations when the hole saw is rotated by the arbor assembly; and

means for locking said adaptor in engagement with said shank and for unlocking said adaptor from engagement with said shank.

2. (Original) An arbor assembly as defined in claim 1, wherein said shank includes a shank passageway and a portion of said adaptor is mounted within said shank passageway.

3. (Original) An arbor assembly as defined in claim 2, wherein a portion of said shank passageway includes flats and said adaptor includes flats on an exterior surface, wherein said flats on said portion of said shank passageway mate with said flats on said exterior surface of said adaptor.

4. (Original) An arbor assembly as defined in claim 2, wherein said means for locking includes at least one ball passageway in said shank and a ball groove in said adaptor, and wherein when

Serial No.: 10/773,746

Art Unit: 3722

Page 2

said adaptor is positioned within said shank passageway, said at least one ball passageway is aligned with said ball groove.

5. (Original) An arbor assembly as defined in claim 4, wherein said means for locking further includes at least one locking ball positioned within said at least one ball passageway.

6. (Original) An arbor assembly as defined in claim 5, wherein said means for locking further includes a sleeve, a ball protrusion extending from an inner surface of said sleeve for moving said locking ball into engagement with said ball groove of said adaptor.

7. (Original) An adaptor assembly as defined in claim 1, further including a C-ring recess on an outer surface of said shank; a C-ring positioned therein; and said means for locking include: a sleeve, a locking protrusion extending from an inner surface of said sleeve, and wherein when said locking protrusion is positioned distally of said C-ring to lock said assembly and said locking protrusion is positioned proximally of said C-ring to unlock said assembly.

8. (Original) An arbor assembly as defined in claim 1, wherein said shank includes a set screw passageway and a set screw positioned within said set screw passageway.

9. (Currently Amended) An arbor assembly as defined in claim 8, for mounting a hole saw to a drill, the arbor assembly comprising:

Serial No.: 10/773,746

Art Unit: 3722

Page 3

a shank for engagement with the drill, said shank including a set screw passageway;  
a set screw positioned within said set screw passageway;  
an adapter for supporting the hole saw, said adapter being mounted to said shank; and  
means for locking said adapter in engagement with said shank and for unlocking said  
adapter from engagement with said shank, wherein said means for locking includes including a  
sleeve, a set screw recess in said sleeve and sleeve, said sleeve is maintained being maintained on  
said shank due to the engagement between said set screw and said set screw recess.

10. (Currently Amended) An arbor assembly ~~as defined in claim 8, for mounting a hole saw to a~~  
~~drill, the arbor assembly comprising:~~

a shank for engagement with the drill, said shank including a set screw passageway;  
a set screw positioned within said set screw passageway;  
an adapter for supporting the hole saw, said adapter being mounted to said shank; and  
means for locking said adapter in engagement with said shank and for unlocking said  
adapter from engagement with said shank, wherein said means for locking includes a sleeve and  
having a set screw access passageway in said sleeve for providing access to said set screw.

11. (Currently Amended) An arbor assembly as defined in claim 1, wherein said adaptor  
includes a threaded nose for positioning within an aperture through a backplate of a hole saw.

12. (Cancel)

Serial No.: 10/773,746

Art Unit: 3722

Page 4

13. (Original) An arbor assembly as defined in claim 12 claim 11, further including a bushing mounted to said nose of said adaptor.

14. (Cancel)

15. (Cancel)

16. (Currently Amended) An arbor assembly for mounting a hole saw to a drill, the arbor assembly comprising:

a shank for engagement with the drill;

an adaptor for supporting the hole saw, said adaptor slidably engaged with said shank and having apertures therein for receiving fasteners extending through a backplate of the hole saw;

a sleeve slidably engaged with said shank; and

means associated with said sleeve for locking said adaptor in engagement with said shank and for unlocking said adaptor from engagement with said shank.

17. (Currently Amended) An arbor assembly as defined in claim 16, further including a sleeve slidably engaged with said shank:

wherein said adaptor is locked in engagement with said shank when said sleeve is moved to a distal position and said adaptor is unlocked in engagement with said shank when said sleeve is moved to a proximal position.

Serial No.: 10/773,746

Art Unit: 3722

Page 5

18. (Currently Amended) An arbor assembly as defined in claim 16, wherein said means associated with said sleeve includes at least one locking ball, and wherein said shank includes at least one ball passageway; said adaptor includes a ball groove aligned with said ball passageway, and said sleeve moves said locking ball into said at least one ball passageway and into said ball groove when said adaptor is locked in engagement with said shank.

19. (Currently Amended) An arbor assembly ~~as defined in claim 16, further including for mounting a hole saw to a drill, the arbor assembly comprising:~~

a shank for engagement with the drill;

a set screw mounted to said shank;

an adapter for supporting the hole saw, said adaptor slidably engaged with said shank;

a sleeve slidably engaged with said shank; and wherein

said set screw engages engaging said sleeve; and

means associated with said sleeve for locking said adapter in engagement with said shank

and for unlocking said adapter from engagement with said shank.

20. (Cancel)

21. (New) An arbor assembly as defined in claim 1, wherein said adaptor further includes a shoulder for engaging said O-ring.

Serial No.: 10/773,746

Art Unit: 3722

Page 6

22. (New) An arbor assembly as defined in claim 21, wherein said O-ring is compressed between said shoulder of said adaptor and said shank.
23. (New) An arbor assembly as defined in claim 1, wherein said adaptor includes a shaft having a proximal end and a distal end, a flange extending outwardly from said shaft adjacent said distal end; and at least two apertures through said flange capable of receiving hole saw mounting screws.
24. (New) An arbor assembly as defined in claim 23, wherein said adaptor further includes a nose extending from said distal end of said shaft wherein the diameter of said nose is sized to extend through an aperture through the backplate of the hole saw.
25. (New) An arbor assembly as defined in claim 16, wherein said adaptor further includes a shaft having a proximal end and a distal end and a flange extending outwardly from said shaft adjacent said distal end; and  
wherein said at least two apertures are provided through said flange for accepting fasteners extending through a backplate of the hole saw.
26. (New) An adaptor as defined in claim 25, further comprising a nose extending from said distal end of said shaft wherein the diameter of said nose is sized to extend through an aperture through the backplate of the hole saw.

Serial No.: 10/773,746  
Art Unit: 3722  
Page 7

27. (New) An adaptor for use in connection with a quick change assembly for mounting a hole saw to a drill, said adaptor comprising:

a shaft having a proximal end and a distal end,

a pilot drill bit passageway through said shaft;

a flange extending outwardly from said shaft adjacent said distal end; and

at least two apertures extending through said flange capable of receiving hole saw mounting screws.

28. (New) An adaptor as defined in claim 27, further comprising:

a nose extending from said distal end of said shaft wherein the diameter of said nose is sized to extend through an aperture through the backplate of the hole saw.

29. (New) An adaptor as defined in claim 27, wherein at least a portion of the outer surface of said shaft is hexagonally-shaped.

30. (New) An adaptor as defined in claim 27, further including a shoulder extending around a circumference of said shaft.

31. (New) An adaptor as defined in claim 27, further including a ball groove extending around a circumference of said shaft.

Serial No.: 10/773,746

Art Unit: 3722

Page 8

32. (New) An assembly as defined in claim 9, wherein said assembly further includes a pilot drill bit maintained within said shank by said set screw.

33. (New) An assembly as defined in claim 9, said means for locking further including at least one locking ball passageway through said shank and a locking ball, and wherein movement of said sleeve is limited by said set screw to maintain said locking ball at least partially within said locking ball passageway.

Serial No.: 10/773,746  
Art Unit: 3722  
Page 9